Exhibit A

Ways and Means
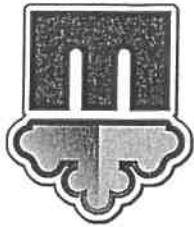## 2/19/2019

HB0565 - Delegate Mosby

Election Law - Voting Systems - Accessibility for Voters With Disabilities

TOTALS: Panels: 2   FAV: 7   FWA: 0   UNF: 2   INFO: 1   Oral: 10   Written: 9   2/19/2019 1:00 PM

Type	Position	Testify	Name	Organization	Address	Phone	Email
Panel - Bill Sponsor	FAV	Oral	Delegate Mosby				
Panel - Public	FAV	Both	ronza othman	nfbmd		4107159596	
	FAV	Both	tyrone bullock	nfbmd			
	FAV	Both	sharon maneki	nfbmd			
	FAV	Both	marc maurer	nfbmd			
Individual	FAV	Both	Mat Rice	People On The Go			
Individual	FAV	Both	jonathan lazar	university of maryland			
Individual	UNF	Both	Robert Ferraro	SAVE our Votes			
Individual	UNF	Both	Kevin Kinnally	Maryland Association of Counties			
Individual	INFO	Both	Katherine Berry	Maryland Association of Election Officials			

MARYLAND
Association of
COUNTIES

House Bill 565

Election Law - Voting Systems - Accessibility for Voters With Disabilities

MACo Position: **OPPOSE**

To: Ways & Means Committee

Date: February 19, 2019

From: Kevin Kinnally

The Maryland Association of Counties (MACo) **OPPOSES** HB 565. This bill would require each voter to use a ballot marking device that is accessible to voters with disabilities to vote at an early voting center or an Election Day polling place. The legislation places a very substantial administrative and cost burden onto local Boards of Elections, whose functions are supported by county funding.

HB 565 seeks to ensure that voters with disabilities are provided specified access to voting that is equivalent to access afforded voters without disabilities. **MACo does not raise policy objections with this goal – county concerns are merely practical and cost-driven.**

As a rule, MACo resists state policies that result in costly or burdensome local implementation. This bill would result in substantial costs to local Boards of Elections, driving needs for additional ballot marking devices (approximately 18,000 statewide) to accommodate all eligible voters, as well as increased storage and transportation costs.

Furthermore, local Boards of Elections indicate substantial costs for information technology personnel to test, prepare, troubleshoot, and maintain the additional ballot marking devices. According to the bill's fiscal and policy note, county expenditures would increase by $6 million per election cycle.

Under state law, counties have no choice but to fund these costs – competing for limited local funds against education, public safety, roadway maintenance, and other essential public services.

This bill would place a costly mandate on county governments to carry out new state policy. Accordingly, MACo urges the Committee to issue an **UNFAVORABLE** report on HB 565.
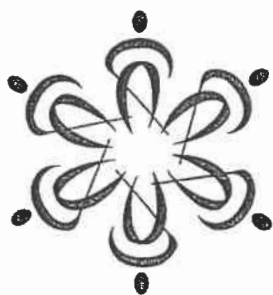
NATIONAL FEDERATION OF THE BLIND

MARYLAND

Live the life you want.

Subject:	**Support for HB 565**
To:	**House Ways and Means Committee**
From:	**Tyrone Bullock**
Contact:	**4414 Marriotsville Road** **Owings Mills, MD 21117**
Date:	**February 19, 2019**

Please vote in favor of HB 565, a bill to create one voting system for all of the citizens in Maryland.

I lost my sight in 2016. I was surprised to learn that losing my sight also meant the loss of my ability to cast a secret ballot. I can use the electronic ballot marking device very well however, the problem is that this device produces a ballot that is smaller than ballots marked by hand. Making it identifiable when votes must be recounted.

I am the same person that I was before I lost my sight, why should I face such discrimination just because I am blind? A vote in favor of HB 565 is a vote to end discrimination. Please support this important bill and eliminate a separate unequal voting system for the disabled.

Maryland Developmental Disabilities Council

EMPOWERMENT · OPPORTUNITY · INCLUSION

House Ways and Means Committee
February 19, 2019
HB 565: Election Law – Voting Systems – Accessibility for Voters with Disabilities
Position: **Support**

The Maryland Developmental Disabilities Council (DD Council) is a statewide public policy organization that promotes the full inclusion of people with developmental disabilities in all aspects of community life by eliminating barriers, creating opportunities, empowering people, and promoting innovation. The DD Council is led by people with developmental disabilities and their families. From that perspective, the DD Council supports HB 565.

Voting is a fundamental right that Maryland's citizens with disabilities want and need to participate in. While much has been done to increase access to voting in Maryland; HB 565 is needed to remedy continued concerns and ensure all of Maryland's voters can access their fundamental right to vote privately and independently.

State law requires the State's voting system to:
1. Provide access to voters with disabilities that is equivalent to access afforded voters without disabilities without creating a segregated ballot for voters with disabilities;
2. Ensure independent, private casting, inspection, verification, and correction of secret ballots by voters with disabilities in an accessible media by both visual and nonvisual means, including synchronized audio output and enhanced visual display; and,
3. Comply with the Americans with Disabilities Act and the Help America Vote Act.

Maryland uses ballot marking devices that include accessibility features for voters with disabilities. This more accessible voting system began in the 2004 elections, but did not produce the paper ballot records needed for the purposes of recount and verification. As a result, a new voting system was adopted and first used in 2016. Prior to the 2016 election, the State Board of Election reduced the number of voters that must use the ballot marking device from 30 to 2. During the 2016 general election, 12 of the 24 counties had precincts that did not reach the 2 voter minimum. During the 2018 primary election, 9 counties had polling places where only one vote was cast using a ballot marking device.

HB 565 would require each voter, with or without disabilities, to use a ballot marking device that is accessible to voters with disabilities so that a ballot cast by a voter with a disability is not distinguishable from a ballot cast by a voter with a disability. Consistent and widespread usage of ballot marking devices that are accessible will allow voters to vote privately and independently and ensure voters with disabilities have equivalent access to exercise the fundamental right to vote.

Contact: Rachel London, Deputy Director
          RLondon@md-council.org

Subject:	**Support for HB 565**
To:	**House Ways and Means Committee**
From:	**Joel Zimba**
Contact:	**2824 Saint Paul St., Apt. 1**
	Baltimore, MD 21218
	443-722-3269
Date:	**February 19, 2019**

I regret that I am unavailable to appear in person to testify in favor of HB 565. If I were not travelling for work, I would certainly be present.

I have been a resident of Baltimore City for fifteen years. During that time I have voted in every primary and general election. As I am blind, I use the accessible voting technology in place at the polls in order to vote independently. Let me be the first to say that the quality of the devices and the knowledge of the poll workers has increased steadily over time. In general, I am very pleased with the voting system in Maryland and I have used it successfully for quite some time.

For the past few election cycles, I voted at 100 East 26 St. in Charles Village. This location is just a few blocks from my home. I have even gotten to know a few of the poll workers by name, as many of the same people are there election after election. Again, voting has become an enjoyable experience. This actually brings me to the crux of the issue.

The newest voting machines print a paper ballot which is then scanned by a separate machine. The ballot marking machines work quite well and I can complete my independent vote in a matter of minutes. In fact, I participated in one of the early testing phases of the devices. The one problem is that the ballots produced by the accessible ballot marking devices are not identical to those marked by a means other than the ballot marking tool. This means that if few, or even one person were to use the accessible ballot marking device at a given location, it would be very easy to identify that person. This was the case for me in the 2018 Primary.

I was the only voter who used the ballot marking device in my precinct. Therefore, during the recounts in Baltimore City, my vote was definitely identifiable. I lost my privacy and my secret ballot. This is blatant discrimination. State and Federal voting laws specify that a vote must be secret.

This past election has been full of criticism for the voting process. Voting is one of the most vital parts of our democracy. I would like to think that Maryland would want to be beyond reproach when it comes to fair and well-run elections.

Prevent further discrimination against blind and disabled voters like me by voting yes on HB 565.
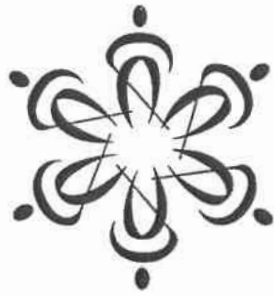
NATIONAL FEDERATION
OF THE BLIND
MARYLAND

Live the life you want.

Subject:	**Support for HB 565**
To:	**House Ways and Means Committee**
From:	**Ed Jackson**
Contact:	**1538 Upshire Road** **Baltimore, MD 21218**
Date:	**February 19, 2019**

I served in the United States Army for 22 years. I was involved in such operations as Desert Storm and the Vietnam War. I believe in the democratic process and made an extra effort to vote during my time in the military. When I started to lose my vision in 1997, I still continued my practice of voting in every election.

I lost my right to a secret ballot in the 2016 and 2018 elections along with other blind and disabled voters. I must use the electronic ballot marking device so my ballot looks different then the voters who mark their ballot by hand. My vote can be identified because very few people use this machine.

As a veteran who served his country I believe it is extremely unfair that I should face such discrimination. Disabled veterans deserve the same right to a secret ballot. Voting in favor of HB565 will restore this right. I am proud of my service to my country. Now it is time for you to stand up for disabled voters and end discrimination by voting for HB565.

People On The

Maryland

Moving Forward • Advocating for Change

Committee: Ways and Means

February 19, 2019 by Mat Rice

HB 565 – Election Law – Voting systems – Accessibility for Voters with Disabilities

Position: support

People on the Go of Maryland the statewide advocacy group ran for and by those with intellectual and or developmental disabilities is here to testify in support of the proposed legislation to increase protections for people with disabilities with regards to voting. It is the most fundamental right of our democratic process to have the right to vote in privacy and without outside influence.

We feel that having people with disabilities as the only ones to use the electronic ballot marking device is a privacy issue. People on the Go feels the State Board of Elections and local boards of elections should expand the use of the ballot marking devices during early voting and on election day because people with and without disabilities should be able to use both versions of the ballot marking devices, this ensures the privacy of voters with and without disabilities is retained. If only people with disabilities use the electronic ballot marking devices it would allow the votes of people with disabilities be known since the ballot style is different than the hand-marked ballot.

Maryland Association of Election Officials
Representing the Local Election Boards of the State of Maryland

February 19, 2019

Delegate Anne Kaiser, Chair
Maryland House Ways and Means Committee
Room 131 House Office Building
Annapolis, MD 21401-1991

RE: HB565 - comment

Delegate Kaiser and Committee Members:

My name is Katherine Berry. I am the Election Director in Carroll County and the co-chair of the Maryland Association of Election Officials Legislative Committee. MAEO represents the local boards of elections throughout the State of Maryland. I am here today representing myself and the Maryland Association of Election Officials (MAEO) to offer the following comments regarding HB565 – Election Law – Voting Systems – Accessibility for Voters with Disabilities.

HB565 would remove the requirement of having pre-printed paper ballots at early voting and the polling places and require every voter to use a ballot marking device so that someone's ballot may not be singled-out. The current voting system allows for voters to use a ballot marking device or vote a traditional paper ballot. In theory this may be very appealing to election administrators because it would eliminate the need for planning how many ballots need to be deployed, but in practice, the current ballot marking device might not be the best option.

The local board of election offices are concerned about the following:
1. The need for additional warehouse space to store ballot marking devices AND scanning units.
2. Added preparation time for testing the ballot marking devices and scanning units.
3. Transportation carts will need to be purchased and there will be an increase in cost for the transportation of the ballot marking devices.
4. Specimen ballots that are mailed to voters will be longer in length because, like with previous electronic voting systems, a screen shot of the ballot marking device screen must be provided.
5. Ballot marking devices force voters to go through every screen, so if a person only wishes to vote for President of the United States, they have to progress through each screen before allowing the ballot activation card to be ejected.
6. Voters will stand in line between check-in and usage of the ballot marking device for a longer period of time.
7. Voters will need to scan the ballot activation card into the scanning unit creating potential for multiple long lines.
8. The amount of ballot marking devices required for each polling place may be equivalent to the amount of voting booths we currently have, but ballot marking devices take up much more space, each is required to be plugged in separately and not daisy chained and require more power sources than previous electronic voting equipment.

For the reasons I have outlined today, I hope that you will take these comments into serious consideration before making a decision regarding HB565.

Thank you for your time. If you have any questions, please give me a call at 410-386-2958, or via e-mail at Katherine.berry@maryland.gov.

MARYLAND CATHOLIC CONFERENCE

ARCHDIOCESE OF BALTIMORE † ARCHDIOCESE OF WASHINGTON † DIOCESE OF WILMINGTON

February 19, 2019

HB 565
Election Law – Voting Systems – Accessibility for Voters With Disabilities

House Ways and Means Committee

Position: Support

The Maryland Catholic Conference ("Conference") represents the public policy interests of the three Roman Catholic (arch)dioceses serving Maryland: the Archdiocese of Baltimore, the Archdiocese of Washington, and the Diocese of Wilmington, which together encompass over one million Marylanders.

House Bill 565 encourages equality for all Maryland citizens by requiring each voter to use a ballot marking device that is accessible to voters with disabilities to vote at early voting centers and Election Day polling places and prohibits certain ballots from being set apart or distinguishable from a voter without a disability.

Prior to the 2016 election, all Maryland voters used the same method to mark their ballots. During the 2016 and 2018 elections, ballots cast by voters with disabilities were easily distinguished from the hand marked ballots cast by the majority of voters resulting in a loss of privacy and secrecy, both of which are fundamental aspects of voting rights in the United States.

According to the latest data from the Centers for Disease Control and Prevention (CDC), 19.3 percent of adults in Maryland have some type of disability. Building inclusive, vibrant democracies depends on the active engagement of all citizens in public life. Maryland should seek practices and policies designed to identify and remove physical and communication barriers that could hamper the ability to have full participation in society.

For these reasons, the Conference urges a favorable report on House Bill 565.

SAVEourVotes
SECURE•ACCESSIBLE•VERIFIABLE ELECTIONS FOR MARYLAND

HB 565: Election Law—Voting Systems—Accessibility for Voters With Disabilities
House Ways & Means Committee, February 19, 2019
Position: OPPOSE

Madame Chair and Esteemed Committee Members,

This bill seeks to address the problem that voters who use the ExpressVote Ballot-Marking Device have a ballot that is different in size, shape, and format from those who mark their ballots by hand. Since voters with many types of disabilities need to use these devices to mark a paper ballot, some disability advocates fear that this would enable people to determine how the disabled community voted. The remedy proposed by this bill would be to require all voters to use this device to mark their ballots instead of marking paper ballots by hand.

While undoubtedly well-intentioned, this bill proposes a drastic solution that would require probably about 10 times the amount of equipment Maryland currently uses, would cause long wait times at the polling place, would disadvantage candidates, and would create ballots that voters cannot verify are accurate. We respectfully urge you to reject this legislation.

Background

In 2007 the General Assembly voted unanimously to move Maryland away from unverifiable electronic voting to paper ballots counted by ballot-scanners. This requirement of a voter-verifiable paper record (§9-102(d)(1)vii) is now widely established as the "gold standard" for voting systems because it preserves the original record of voter intent which can be used for recounts and audits of the election results. The previous paperless touch-screen machines provided no way for voters to verify whether their votes were recorded accurately in the machine's memory, and the machines were proven to be highly vulnerable to error and fraud.

The current voting system, first used in the 2016 election cycle, has most voters use hand-marked paper ballots counted by ballot scanners. For voters unable to mark a paper ballot independently, the voting system provides a Ballot-Marking Device (BMD) – an electronic interface similar to the previous touch-screen system except that it does not store a record in its memory of the ballots marked on it. Instead it prints out a paper record of each voter's selections which is put into the same scanners used to count the rest of the ballots so the votes are tabulated with all the other votes cast in the precinct.

However, the ballot printed by the ExpressVote BMD does not look like the ballots hand-marked by other voters. Instead, it uses a smaller card showing only the voter's selected candidates or choices, which are depicted both as text and as barcodes (please see the diagram on the next page).

Ballots printed by the ES&S ExpressVote Ballot-Marking Device are not verifiable by the voter because the voter can't read the barcodes used to count the votes

Paper ballots marked by hand are voter-verifiable

Ballot scanner and automated "audit" software can read only the barcodes, not the text

Voter can read only the text, not the barcodes, and cannot verify that they match

Voter, scanner and automated "audit" software are all reading the same thing — the ovals filled in on the ballot

Please note: These ballot images are for purposes of illustration only and are not intended to reflect a political viewpoint.

BMD ballots cannot be verified by voters or by the automated "audit"

The ExpressVote BMD ballot format creates a problem: voters can read the summary text but not the barcodes. But both the scanner that counts the votes and the software for the automated "audit" of the ballots can read only the barcodes, not the text. This means that if the BMD software was hacked and programmed to substitute some barcodes for a different candidate instead of the candidate the voter had chosen, the voter would not be able to detect that and neither would the automated "audit." The only way to know if the barcode matches the voter's selections would be to hand-count every vote on the BMD ballots and compare the results to the totals calculated by the scanners. But Maryland does not do this.

After detecting Russian interference in US elections, the intelligence communities, the Department of Homeland Security, and the National Academy of Science all have stated that voter-verifiable paper ballots with robust manual audits are the most secure way to conduct elections. The ExpressVote BMD ballots, which voters cannot adequately verify, do not have the properties necessary to secure Maryland's elections.

Onscreen display and navigation issues

In addition, the ExpressVote BMDs have interface problems that confuse voters and disadvantage candidates. The BMDs currently can display only a limited number of candidates on a single screen. When the number of candidates exceeds that limit, which happens frequently, the contest continues on another "page." The voter must push a flashing bar on the screen to move to the next screen — similar to scrolling up and down, but it does not use a scrolling interface. Voters are forced to go to each screen of that contest in order not to disadvantage the candidates who are displayed on later screens. In addition, there are separate buttons marked "Previous" and "Next" that move voters from one contest to another.

Voters find this navigation extremely confusing, becoming baffled when the machine won't allow them to move to the next contest, or not understanding how they suddenly got to a different contest when they were trying to look at another screen of the same contest. They often need assistance from election judges, which slows down voting.

This problem was identified before the 2016 elections and the vendor has promised a solution but so far none has been developed. Understanding that this issue potentially disadvantages candidates, the State Board of Elections (SBE) has limited the widespread use of the BMDs until this problem is resolved.

Long lines and high costs

Election officials have noted that voting on the BMDs is slower than hand-marking a paper ballot. When the SBE was considering deployment of additional BMDs in 2017, they surveyed local boards of elections for input. While most favored more flexibility in adding a few BMDs to early voting sites or large polling places with high demand, several specifically commented that they do not support using only BMDs during early voting, as the SBE is currently considering.

Election officials from Carroll, Harford, and Wicomico Counties attended the August 24, 2017 SBE meeting to speak out against the widespread use of these BMDs. Other counties submitted written comments. Their primary concern was long lines. Please see their attached comments and/or listen to the meeting recording:
http://www.elections.state.md.us/about/audio/State%20Board%20of%20Elections%202017-8-24.mp3 (Time stamps 1:11:56 – 1:12:05 and 1:18:50 to 1:20:41)

The major logistical problem with using a machine to mark every ballot is that it requires a lot of equipment to accommodate voter demand during peak voting hours. Finding additional spaces to hand-mark a paper ballot is simple and inexpensive, but if every voter has to wait for an available ballot-marking machine, long lines would form and voters might leave without voting, as sometimes happened with our previous touch-screen voting system.

In addition, our old voting system required about ten times more voting machines than the number of BMDs we currently have, and even that quantity was not large enough to prevent long wait times during peak voting hours. Obtaining this additional equipment would be a major expense including not just the BMDs themselves but also the programming, maintenance, storage, transportation, and other costs of using the machines. The fiscal note is not yet available as I write this, but studies of the old touch-screen system would indicate that the increased costs could be tens of millions of dollars for the state and the counties.

The best solution, for now

Our organization is very concerned about accessible voting, and we empathize with the National Federation of the Blind and others who seek equitable access. But in the Prince George's County precinct where I serve as a Chief Election Judge, our BMD is busy all day with many categories of voters, including those who need the accessible features of the machine, those who prefer a touch-screen interface, and those who have already spoiled two ballots and need to be sure their third and final ballot is correctible. It would not be possible to discern which ballot belongs to whom. The current limitation on the use of BMDs imposed by the SBE ensures that the ballots of disabled voters are not isolated from the ballots of other voters while minimizing the risks of using this poorly designed equipment.

We sincerely urge your "no" vote on this legislation that would disadvantage candidates, cause long lines at the polls, increase costs, and potentially leave election outcomes in doubt.

With greatest respect for all that you do to improve voting in Maryland,

Rebecca Wilson, Co-Director
SAVE our Votes: Secure, Accessible, Verifiable Elections for Maryland
rebecca@SAVEourVotes.org
202.601.8182 cell

Comments from Local Boards of Elections on the Use of Only Ballot-Marking Devices During Early Voting

Excerpted from pages 21 -25 of the August 24, 2017 State Board of Elections meeting packet: https://www.elections.maryland.gov/about/meeting_materials/August_2017.pdf

Calvert County Board of Elections
Submitted August 17, 2017 by Gail Hatfield, Elections Administrator

I support the expanded use of BMD's and feel the local boards should have flexibility in deploying additional voting equipment as needed in polling places and early voting centers, since they know best where the need exists. Specifically in Calvert, I would like the option to employ two additional BMD's during early voting, as that always seemed to be where the lines were.

Prince George's County Board of Elections
Submitted August 24, 2017 by Alisha Alexander, Election Director

I do not want to conduct early voting using BMD's as the only source of voting. There are many issues that warrant concern and I don't believe they can be resolved prior to June 2018 (i.e. electrical requirements, procuring/leasing additional BMD's and printers, training Election Judges to select the correct ballot style on the screen if printers aren't available, line management [it takes voters more time to vote], the candidate navigation issue, etc.)

Frederick County Board of Elections
Submitted August 22, 2017 by Stuart Harvey, Election Director

What I do not favor is to allow only the BMDs to be used at early voting locations. I do not believe that BMDs alone could process the thousands of voters that we expect to take advantage of early voting in 2018. Additionally, due to the length of the gubernatorial ballot, the amount of time that a voter takes to use the BMD, compared to the regular paper ballot, has the potential to make for very long lines at the BMDs if they were to be the only option for voters at early voting.

Caroline County Board of Elections
Submitted August 23, 2017 by Allison Murphy, Election Director

I understand counties with an overwhelming number of ballot styles may be interested in using all BMDs during early voting. However, I do not want to exclusively use BMDs during early voting in Caroline County. We have a manageable number of ballot styles and marking paper ballots seems to be faster for voters than using the BMD.

Common Cause

121 Cathedral Street
Annapolis, MD 21401
443.906.0442

www.commoncause.org

Maryland
Holding Power Accountable

February 19, 2019

Testimony on HB 565
Election Law - Voting Systems - Accessibility for Voters With Disabilities
Ways and Means

Position: Unfavorable

Common Cause Maryland opposes HB 565, which would require that every early voter in Maryland use ballot marking devices.

We do not disagree with HB 565's intent, which is to help ensure the secrecy and accessibility of the vote for disabled Marylanders. We believe that further efforts should be taken to ensure these values are met. However, we believe that HB 565 goes too far to solve this problem, increasing our dependence on third party voting machine manufacturers, decreasing our election security, and potentially lessening the efficiency of our current voting processes in a way that could reduce access by increasing wait times at the polls.

Ballot marking devices are vital tools to assist certain disabled Marylanders in having their voices heard in elections. Marylanders with decreased motor functions, or limited eyesight, may find it impossible to vote on a paper ballot without assistance. While Maryland allows for this assistance, disabled Marylanders understandably prefer the secrecy and independence in their vote allowed by ballot marking devices.

However, because these devices provide unique benefits to disabled Marylanders, and there are a limited number of machines per precinct (if there is even more than one), the current system reduces secrecy for disabled Marylanders. Current law tries to alleviate this problem by allowing voters to pick their method of voting – whether it is by ballot marking device or paper ballot at the precinct.

HB 565 laudably tries to alleviate this situation, but we are concerned that it goes too far. Common Cause Maryland prefers as many voters as possible vote paper ballots – they are easily auditable, clear to the voter, and while imperfect, never break down. Because HB 565 would require all Marylanders to use ballot marking devices, we urge the committee to give an unfavorable report.
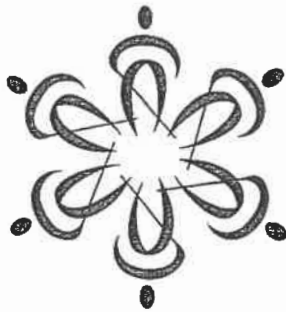
1

NATIONAL FEDERATION OF THE BLIND

MARYLAND

Live the life you want.

Subject:	**Support for HB 565**
To:	**House Ways & Means Committee**
From:	**Members of the National Federation of the Blind of Maryland**
Contact:	**Sharon Maneki, Director of Legislation and Advocacy** **National Federation of the Blind of Maryland** **9013 Nelson Way** **Columbia, MD 21045** **Phone: 410-715-9596** **Email: nfbmd@earthlink.net**
Date:	**February 19, 2019**

THE PROBLEM

For most of its history, all voters in Maryland used the same voting system. This situation changed in the 2016 and 2018 elections because the Maryland State Board of Elections (SBE) created two systems of voting: the ExpressVote electronic ballot marking device (BMD), and the paper-based system in which ballots are marked by hand. The SBE has selected the voter-verifiable paper-based solution leased from Election Systems and Software (ES&S) as its BMD. Unfortunately, SBE is limiting the use of this BMD by deploying only one device to each polling place. The SBE is further limiting the use of these BMDs by requiring only two voters per polling place to use the BMD. Many blind and disabled voters are forced to use the ES&S BMDs to cast their ballots because they cannot use the hand marked ballots. The problem for blind and disabled voters is that the BMDs produce paper ballots that are smaller in size and differ in content from the hand marked ballots. Thus, in the 2016 and 2018 elections, ballots cast by blind and disabled voters were segregated and too easily identifiable in the overall collection of ballots. Therefore, ballots cast by blind and disabled voters were no longer secret. Maryland no longer had equality in voting.

PROPOSED ACTION

The Maryland General Assembly should enact HB 565, legislation requiring the SBE to create one voting system for all voters in Maryland, when the contract for the ES&S BMDs ends in 2020. The preamble of this legislation should state that there shall be no discrimination on the basis of disability in the voting process. The practice of using segregated ballots must be eliminated.

BACKGROUND

At the end of the 20th century, Maryland began to modernize its voting system. Gradually, Maryland introduced voters to using a touch screen electronic system with all jurisdictions using the same system beginning in the 2004 elections. Voters with disabilities were most pleased because the nonvisual access of this new voting system allowed us to vote secretly and in private for the first time. However, this touch screen system did not produce paper ballot records which would be essential for the purposes of recounts and verification. The SBE was then forced to adopt a new voting system that was capable of producing paper ballot records. This new voting system was first used in the 2016 election.

The state of Maryland was unwilling to spend the money that was needed to purchase enough BMDs for all voters to use in the 2016 elections. This shortage led SBE to deploy only one BMD in each polling place, which forced most voters to mark their ballots by hand. This decision was the beginning of the loss of the secret ballot for blind and disabled voters.

In the 2016 primary election, candidates whose names appeared on the second or third screens of the BMD threatened legal action, complaining that navigating to these screens was too difficult. To appease these candidates, SBE further limited the use of the BMDs by requiring that only two voters per polling place needed to use them. This minimum limitation forced even more voters to mark their ballots by hand.

Maryland Election Law Article §9-102(f)(1), Annotated Code of Maryland, states that a voting system selected and certified by the SBE shall "provide access to voters with disabilities that is equivalent to access afforded voters without disabilities without creating a segregated ballot for voters with disabilities."

On December 18, 2013, the Attorney General of Maryland issued an opinion stating that if SBE chooses to certify an accessible ballot marking device that produces a ballot that is different in size and/or content from the hand-marked ballots, SBE "must establish randomized polling-place procedures to ensure that a significant number of non-disabled voters will use the accessible voting system to protect the secrecy of the ballots cast by voters with disabilities." Requiring only two voters to use the BMD does not meet the definition of randomized polling procedures. We emphasize again that this two-voter minimum requirement denies blind and disabled voters the right to a truly secret ballot.

CRITICAL ERRORS BY THE SBE

The experience of the 2016 primary and general elections demonstrated that all voters had little difficulty in navigating the multiple screens on the BMD. Although the concerns of the candidates were baseless, SBE still refused to change its two-voter policy for the 2018 elections. SBE also chose to disregard the concerns of disabled voters about their loss of the secret ballot.

The National Federation of the Blind of Maryland (NFBMD) maintains that balancing the rights of voters against the complaints of candidates does not justify a system that:

(1) creates the physical segregation voters with disabilities;

(2) causes the segregation of their ballots according to physical appearance and content;

(3) jeopardizes the privacy of their votes.

This was the reason language prohibiting a segregated ballot was included in Maryland Election Law Article §9-102(f)(1), Annotated Code of Maryland.

We emphasize again that there were no reports of voters having difficulty with navigation during the 2016 election season. The issue of ballot order bias exists for both hand marked ballots and BMDs. While most studies agree there is a positive impact on candidates listed first, there is not a consensus on size of the impact.

FAILURE TO IMPLEMENT BMD USAGE POLICY

In the 2016 and 2018 elections, disabled voters were deprived of the guarantee of a secret ballot that has always been afforded to non-disabled voters. The SBE data from these elections demonstrates that the already inadequate SBE policy encouraging two voters in every precinct to use the BMD was a failure.

In the 2016 general election, twelve of the twenty-four counties or county equivalents in Maryland had at least one precinct where only one voter used the BMD. The SBE did not provide the data for precincts with zero voters using the BMD. See Appendix A for details.

The loss of the secret ballot by disabled voters was even worse in 2018 than it had been in 2016. Several primary elections were very close, which resulted in the recounts of votes. The BMD ballots were definitely identifiable during these recounts. In the 2018 primary election, nine counties had polling places where only one vote was cast using the BMD. Once again, SBE did not provide the data for precincts with zero voters using the BMD. See Appendix B for details.

In the 2018 general election, nine counties had at least one precinct where only one voter used the BMD machine. Nine counties also had at least one precinct where zero voters used the BMD machine. See Appendix C for details.

CONCLUSION

The SBE violated Maryland Law by creating a segregated ballot for persons with disabilities. It also ignored the opinion of the Attorney General by creating policies that did not permit true randomization of the use of BMDs by both disabled and non-disabled voters. Consequently, voters with disabilities who must use the BMD no longer have a secret ballot. It is time for Maryland to go back to its practice of using one voting system for all of its citizens by enacting HB 565.

Members of the National Federation of the Blind of Maryland urge the Maryland General Assembly to enact legislation that creates one voting system for all voters in Maryland when the contract for the ES&S BMD voting system ends in 2020. The Supreme Court ruled that separate is not equal, sixty-four years ago. It is time for Maryland to recognize this truth by eliminating discrimination against voters with disabilities. If the ballots of any other protected class of citizen were identifiable, the General Assembly would surely insist that SBE revise its policies. Blind and disabled voters deserve the right to equality in voting and a secret ballot, too. Please vote in favor of HB 565.

Appendix A

2016 GENERAL ELECTION DATA

According to the Maryland State Board of Elections (SBE)[1] data, 12 of the 24 counties or county equivalents in Maryland had at least one precinct where only one voter used the BMD machine. Those locations are:

County	pollname	Expressvote Ballot Cast[2]
Anne Arundel	Earleigh Heights VFD	1
Anne Arundel	Southern Middle School	1
Anne Arundel	Odenton Regional Library	1
Baltimore City	Engine House No. 2	1
Baltimore City	Murty Center- Poe Auditorium	1
Baltimore County	Kingsville Elementary School	1
Baltimore County	Hernwood ES Cafeteria	1
Baltimore County	Stembridge Community Center	1
Baltimore County	Middle River VFD Hall	1
Baltimore County	Long Green VFC Hall A	1
Baltimore County	Gunpowder ES Gym	1
Baltimore County	Pinewood ES Cafeteria	1
Baltimore County	Warren ES Gym	1
Baltimore County	Owings Mills HS Senior Café	1
Baltimore County	Wards Chapel Methodist Church Hall	1
Baltimore County	Church Lane ES M/P Rm	1
Carroll	Francis Scott Key HS Band Room	1
Charles	LaPlata High School Commons Area	1
Cecil	Bayview Elementary School S	1
Dorchester	North Dorchester MS Foyer	1
Dorchester	South Dorchester K-8 School	1
Harford	Old Post Road Elementary School	1
Howard	Northfield ES Cafeteria	1
Howard	Lisbon VFD Hall	1
Howard	Howard HS Gym	1
Prince George's	Kettering Elementary School	1
Prince George's	Greater Lighthouse Church	1
Prince George's	Cesar Chavez Elementary SCHL	1
Prince George's	Hyattsville Public Library	1
Washington	Washington County Technical HS	1
Washington	Williamsport High School	1
Wicomico	Faith Baptist Church Salisbury	1
Wicomico	East Side VFW Memorial Post 2996	1
Wicomico	Sharptown Firemens Memorial Bldg	1

[1]This chart was created from an SBE data export for each county with the ExpressVote (the trade name of the ballot marking device machine) filter applied. The cells indicate voting locations where only one vote was cast using the Ballot Marking Device.

[2] This chart does not include the precincts where no ballots were cast using the ExpressVote BMD.

Appendix B

2018 PRIMARY ELECTION DATA

According to SBE data, nine counties had polling places where only one vote was cast using the BMD.

County	pollname	Expressvote[3] Ballot Cast	Total Ballot Cast
Anne Arundel	Brooklyn Park Community Library	1	159
Anne Arundel	Northeast High School	1	205
Baltimore City	Murty Ctr-Poe Auditorium	1	71
Baltimore City	School #27 Rodgers Elem	1	76
Baltimore City	School #13 Tench Tilghman Elem	1	13
Baltimore City	School #7 Cecil Elem	1	54
Baltimore City	School #122 - Samuel Coleridge-Taylor Elem	1	7
Baltimore City	School #53 Brent Elem	1	373
Baltimore City	School #53 Brent Elem	1	214
Baltimore City	School #39 Dallas F. Nicholas Sr. Elem	1	132
Baltimore City	Enoch Pratt Free Library Pennsylvania Ave Br	1	67
Baltimore City	School #28 William Pinderhughes Elem	1	9
Baltimore City	School #4 Steuart Hill Elem	1	172
Baltimore City	School #4 Steuart Hill Elem	1	52
Baltimore City	Mary E. Rodman Rec Ctr	1	300
Baltimore City	Academy of Success	1	19
Baltimore City	Community Building	1	54
Baltimore City	School #235 Glenmount Elem/Mid	1	156
Baltimore City	Govans Boundary Umc	1	253
Baltimore County	Maiden Choice School - Gym	1	250
Cecil	5-5 Bayview Elementary School	1	332
Harford	Magnolia Elementary School	1	235
Harford	Edgewood Elementary School Cafeteria	1	137
Harford	Edgewood Recreation & Community Center	1	174
Harford	Emmorton Elementary School	1	431
Harford	Joppatowne High School	1	368
Harford	Aberdeen Senior High School Cafeteria	1	321
Harford	Forest Lake Elementary School	1	557
Howard	Running Brook Elem School - Cafeteria	1	255
Montgomery	Chevy Chase United Methodist Church	1	320
Montgomery	Stedwick Elementary School	1	429
Prince Georges	Harmony Hall Regional Center	1	509
Prince Georges	William Beanes Elem Sch	1	289
Prince Georges	Pgcps Bldg.	1	480
Prince Georges	Benjamin D. Foulois Creative & Performing Arts	1	100
Prince Georges	Northview Elem. Sch. Cafe. - A.	1	199
Prince Georges	Benjamin Tasker Middle Sch	1	175
Prince Georges	Waldon Woods Elem Sch	1	751
Washington	Washington County Technical Hs	1	119
Washington	Big Pool Community Hall	1	242

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[3] This chart does not include the precincts where no ballots were cast using the ExpressVote BMD.

Appendix C

2018 GENERAL ELECTION DATA

In the 2018 general election, nine counties had at least one precinct where only one voter used the BMD machine. Nine counties also had at least one precinct where zero voters used the BMD machine.

County	pollName	Expressvote Ballot Cast	Total Ballot cast
Anne Arundel	Annapolis Middle School	0	549
Anne Arundel	Roger "pip" Moyer Recreation Center	0	320
Anne Arundel	Roger "pip" Moyer Recreation Center	0	11062
Anne Arundel	Lindale Middle School	1	806
Anne Arundel	Severna Park Middle·School	1	656
Baltimore City	Engine House #5	0	744
Baltimore City	School #16 Johnston Sq Elem	0	156
Baltimore City	School #55 Hampden Elem	0	49
Baltimore City	School #28 William Pinderhughes Elem	0	27
Baltimore City	School #122 Samuel Coleridge-Taylor Elem	0	41
Baltimore City	School #225 Westport Elem	0	276
Baltimore City	Engine House #51	0	130
Baltimore City	Engine House #42	0	599
Baltimore City	Grace United Methodist Church (040)	0	765
Baltimore City	Grace United Methodist Church (041)	0	822
Baltimore City	School #122 Samuel Coleridge-Taylor Elem	1	15
Baltimore City	Solo Gibbs Rec Ctr	1	466
Baltimore City	St Nicholas Church Hall	1	417
Baltimore City	Carroll Cook Rec Ctr	1	259
Baltimore City	Open Bible Baptist Church	1	330
Baltimore County	Ridge Ruxton School- Multi Purpose Rm	0	899
Baltimore County	Colgate Elementary School - Cafe	0	454
Baltimore County	Sussex Elementary·School-Gym	0	765
Baltimore County	Warren Elementary - Gym	1	1199
Baltimore County	White Marsh Library-Meeting Room	1	187
Charles	St Ignatius Church Hall, Hilltop	0	650
Charles	Trinity Church Hall, Newport	0	1034
Charles	St Marys School Bryantown	1	194
Frederick	Mt Pleasant Ruritan Club	1	2212
Harford	Trinity Lutheran School	0	1510
Harford	Edgewood Elementary School Cafeteria	0	462
Harford	Joppatowne Elementary School	0	1207
Harford	Deerfield Elementary School	0	672
Harford	Abingdon Fire Hall	0	1274
Harford	Old Post Road Elementary School	0	1834
Harford	Church Creek Elementary School	0	2456
Harford	Highlands School	0	782
Harford	St. Mary's Episcopal Church Emmorton	0	323
Harford	Riverside Elementary School	0	889
Harford	Level Fire Hall	0	1661
Harford	Aberdeen Vfw 10028	0	534
Harford	Hickory Elementary School	0	818
Harford	Forest Hill Elementary School	0	1951
Harford	Mountain Christian Church	0	1288

County	pollName	Expressvote Ballot Cast	Total Ballot cast
Harford	Newport Terrace	0	1302
Harford	Forest Lake Elementary School	0	1541
Harford	Bel Air Elementary School Gym	0	987
Harford	Mt. Ararat Lodge	0	808
Harford	Bel Air Middle School	0	843
Harford	Red Pump Road Elementary School	0	1360
Harford	Bel Air High School	0	837
Harford	Southampton Middle School	0	2007
Harford	Wakefield Elementary School	0	995
Harford	C. Milton Wright High School	0	1267
Harford	Prospect Mill Elementary School	0	1029
Harford	Fountain Green Elementary School	0	1303
Harford	St. Matthew Lutheran Church-Great Hall	0	1188
Harford	Victorious Faith Fellowship Church	0	949
Harford	Jarrettsville Elementary School Cafeteria	0	1108
Harford	Youth's Benefit Elementary School	0	1154
Harford	Norrisville Elementary School	0	1297
Harford	North Bend Elementary School	0	1067
Harford	Veronica 'roni' Chenowith Activity Center	0	1245
Harford	Jarrettsville Library	0	723
Harford	North Harford Elementary Cafeteria	0	1193
Harford	Darlington Elementary School	0	717
Harford	Havre De Grace High School	0	768
Harford	Meadowvale Elementary School	0	1120
Harford	Havre De Grace Elementary School	0	859
Harford	Havre De Grace Middle School	0	1557
Harford	Abingdon Elementary School Gym	1	2118
Harford	Fallston Senior High School Cafeteria	1	1737
Harford	Ring Factory Elementary School	1	838
Harford	Harford Technical High School	1	1374
Harford	Dublin Elementary School	1	1270
Harford	North Harford High School	1	1123
Howard	Manor Woods Elem School - Cafeteria	0	852
Montgomery	Martin Luther King, Jr. Middle School	0	1256
Montgomery	Capt. James E. Daly, Jr. Elementary School	0	1074
Montgomery	Tilden Middle School/Gym	1	1207
Prince Georges	Green Valley Academy	0	669
Prince Georges	Dwight D. Eisenhower Middle School	0	489
Prince Georges	Melwood Church of the Nazarene	0	1045
Prince Georges	Harmony Hall Regional Center	1	686
Prince Georges	F.T. Evans Elem Sch - M/P Rm	1	132
Washington	Girls' Inc.	0	318
Wicomico	Wicomico High School - Cafeteria	1	552
Wicomico	East Side Vfw Memorial Post	1	314

*Appendix C (continued)

Testimony on HB 565, February 19, 2019
Jonathan Lazar, Ph.D., LL.M.
Professor of Information Studies, University of Maryland

Testimony to the House Ways and Means Committee

I am here today to state my support for HB 565, because HB 565 addresses the serious problem that currently exists in Maryland related to ballot segregation and ballot secrecy.

1. Background

From 2004-2014, all voters in Maryland used the same ballot approach: the Diebold Accuvote DRE (Direct Recording Electronic) machines. While critics complained that the machines lacked a paper trail, voters with and without disabilities all used the exact same voting machine, which was an ideal situation. In the 2016 and 2018 elections, Maryland used a two-tier approach. Voters primarily used the optical scan paper ballots, however, voters with print-related disabilities, unable to use the optical scan ballots, instead used the ExpressVote ballot marking device (BMD). The ExpressVote creates a ballot size and format which is 4.5 x 14 inches (known as the "skinny ballot"), and only lists the candidates selected. The standard optical scan ballot in Maryland is closer to legal paper size, and lists all candidates, not only those for whom votes were cast.

If all voters (voters with disabilities and those without) use the same BMD, or the BMD marks up a ballot that is identical in size and content to the hand-marked optical scan ballot being used by voters without disabilities, there is no potential segregation of ballots or threat to secrecy of the ballot, as all ballots are identical, exist in large quantities, and are counted together. **This is not the case in Maryland**. If the size and content for the BMD ballots and the hand-marked ballots are not identical, then it is especially important that large quantities of voters use the BMD which creates the "skinny ballot." This would be the only way to ensure that BMD-marked ballots cannot be identified to be ballots only from people with disabilities.

2. The problem

The way that Maryland has implemented the use of the ExpressVote ballot marking device has led to two problems:

1. If very few ballots are cast using the ExpressVote BMD, it is possible to identify that all of the ballots came from voters with print-related disabilities, and the ballots may potentially be segregated and/or treated differently.

2. If only one or two ballots are cast in a polling place using the ExpressVote, it may be possible to re-identify the ballots to individual voters, causing a loss of ballot secrecy. According to data sets provided to me by the Maryland State Board of Elections, in the 2018 general election, there were 22 precincts in Maryland where only one ballot was cast using ExpressVote, in the 2018 primary election, there were 40 precincts where only one ballot was cast using ExpressVote, and in the 2016 general election, there were 34 precincts that had only one ballot cast using ExpressVote (SBE was not able to provide a data set from the 2016 primary election).

3. My data collection on this topic

I have done research involving the 19 other states (and the District of Columbia) which use the ExpressVote ballot marking device. During March-May 2018, I placed a series of phone calls to election officials in the 19 other states (and the District of Columbia) which use the ExpressVote ballot marking device, to learn more about how they handled the potential problems of the unique "skinny ballot" shape of the ExpressVote ballot. If the state had 5 or more jurisdictions which used ExpressVote, I spoke with state election officials. If a state had less than 5 jurisdictions which used ExpressVote, I spoke directly with election officials in each of the jurisdictions. The responses to the phone calls by election officials described a series of 7 policy options on a spectrum, of who is allowed to, is requested to, or may use the ExpressVote BMD. These 7 policies are listed in terms of the likely percentages of votes cast using ExpressVote (from least to greatest), along with nicknames that I created to describe the policy:

1. ("Paper required") Unless they appear to have a disability, voters in that state or jurisdiction are not given the option to use ExpressVote (e.g. Portage County, OH).

2. ("Paper encouraged") Voters in that state or jurisdiction are encouraged to use a paper ballot, but if they ask to use the ExpressVote, they are allowed to do so (e.g. Iowa and Wisconsin).

3. ("Paper encouraged unless there is a wait") Voters in that state or jurisdiction without disabilities are directed to use the paper ballot (non-neutral), unless there is a long wait for paper ballots, in which case voters are directed to use ExpressVote (e.g. Knox County, OH).

4. ("Neutral") Voters in that state or jurisdiction are told that they have a choice of paper or electronic ballot, in a neutral way (e.g. Kansas).

5. ("Neutral unless there is a wait") Voters in that state or jurisdiction are told that they have a choice of paper or electronic ballot, in a neutral way, but when lines are long at

the polling place for paper ballots, polling workers then switch and encourage voters without disabilities to use the ExpressVote machines (e.g. Washington DC).

6. ("BMD Encouraged") Voters in that state or jurisdiction are encouraged to use the ExpressVote device, and only get paper ballots upon request (e.g. West Virginia, and Hardin and McNairy Counties, TN).

7. ("BMD Required") Voters in that state or jurisdiction are required to utilize ExpressVote unless they are using a provisional ballot or an absentee ballot. In this case, there is no issue of the non-standard shape of the ExpressVote ballot, since there are no equivalent paper ballots (e.g. Carson City, Nevada, Wilson County, Tennessee, and Kaufmann County, Texas).

The ballot secrecy problems that exist in Maryland do not exist in most jurisdictions nationwide because voters in other states are using the ExpressVote BMD in large numbers. In these jurisdictions, voters are given the neutral option to vote using ExpressVote, are encouraged to vote using ExpressVote, or are only allowed to vote using ExpressVote.

Furthermore, many jurisdictions have policies in place to increase the number of ExpressVote ballots at each precinct by encouraging poll workers to vote using ExpressVote. For instance, in Iowa, Maine, and Michigan, as well as Bloomington IL, poll workers are encouraged to use ExpressVote to personally vote. There is an additional benefit here: by using ExpressVote for their personal vote, the poll workers also learn how ExpressVote works, and can then assist voters who want to use it.

Maryland is not currently using any of these approaches to increase the number of voters who vote using ExpressVote.

4. What the law requires

In 2013, the Administrator of the State Board of Elections asked the Maryland Attorney General to issue a statement on the meaning of the term "segregated ballot" within Maryland election law.[1] The Attorney General indicated that "the ballots cast by voters with disabilities could not be identified as such during the process of casting,

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[1] Maryland Attorney General (2013). Election Law: Voting Systems-Statutory Construction-Requirement that Voting Systems Not Create a "Segregated Ballot" for Voters with Disabilities. Available at: http://www.marylandattorneygeneral.gov/Opinions%20Documents/2013/98OAG152.pdf

counting, and, if necessary, re-counting the paper ballots cast in an election."[2] According to the Attorney General, there are only three ways to meet this statutory requirement:

1. "SBE may require all voters to use a voting system that is accessible to voters with disabilities."

2. "SBE may certify an accessible voting system that generates a ballot that is formally identical to those ballots cast by non-disabled voters so long as all ballots are cast, counted, and stored together."

3. "The statute permits SBE to certify an accessible voting system that generates a non-identical ballot, so long as voting procedures are implemented to ensure that non-disabled voters use the accessible system as well and do so in sufficient numbers to prevent the resulting ballots from being identified as having been cast by voters with disabilities."[3]

5. Why I support HB 565

The current implementation of voting in Maryland clearly does not meet the statutory requirement, as described by the Maryland Attorney General. We currently have a segregated ballot in Maryland, and for some voters in Maryland who have print-related disabilities, they have been denied access to a secret ballot. Other jurisdictions around the country who use the ExpressVote BMD (as described in earlier sections of my testimony), have used it in ways which do not lead to a segregated ballot. However, the Maryland State Board of Elections continues to implement voting policies which create a segregated ballot. HB 565 would clearly eliminate these practices, with the current text of the bill:

"A BALLOT CAST BY A VOTER WITH A DISABILITY MAY NOT BE SET APART OR DISTINGUISHABLE, IN SIZE AND FORM, FROM A BALLOT CAST BY A VOTER WITHOUT A DISABILITY."

I enthusiastically support HB 565 because it would end the practice of segregated ballots in the state of Maryland.

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[2] Maryland Attorney General (2013). Election Law: Voting Systems-Statutory Construction-Requirement that Voting Systems Not Create a "Segregated Ballot" for Voters with Disabilities. Available at: http://www.marylandattorneygeneral.gov/Opinions%20Documents/2013/98OAG152.pdf

[3] Maryland Attorney General (2013). Election Law: Voting Systems-Statutory Construction-Requirement that Voting Systems Not Create a "Segregated Ballot" for Voters with Disabilities. Available at: http://www.marylandattorneygeneral.gov/Opinions%20Documents/2013/98OAG152.pdf

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Dr. Jonathan Lazar is a Professor in the College of Information Studies (iSchool) at the University of Maryland. At the University of Maryland, Dr. Lazar is the associate director of the Trace Center, the nation's oldest research center on technology and disability, and is a faculty member in the Human-Computer Interaction Lab. Dr. Lazar joined the iSchool in 2019, after 19 years as a Professor of Computer and Information Sciences at Towson University, where he served as director of the information systems program for 14 years. Dr. Lazar has authored or edited 12 books, including Research Methods in Human-Computer Interaction (2nd edition, co-authored with Heidi Feng and Harry Hochheiser), Ensuring Digital Accessibility Through Process and Policy (co-authored with Dan Goldstein and Anne Taylor), and Disability, Human Rights, and Information Technology (co-edited with Michael Stein). He has published over 140 refereed articles in journals, conference proceedings, and edited books, and has been granted two US patents for his work on accessible web-based security features for blind users. He frequently serves as an adviser to government agencies and regularly provides testimony at federal and state levels, and multiple US federal regulations cite his research publications. Dr. Lazar has recently been honored with the 2017 University System of Maryland Board of Regents Award for Excellence in Research, and the 2016 SIGCHI Social Impact Award, given annually to an individual who has promoted the application of human-computer interaction research to pressing societal needs.

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Center for Civic Design

Testimony to the House Ways and Means Committee for HB565, and to the Senate Education, Health and Environmental Committee for SB363

Whitney Quesenbery, Co-Director Center for Civic Design[1]

The Center for Civic Design is a nonprofit, nonpartisan research organization. We conduct research and work with state and local election offices to improve the voter experience, make elections easier to administer, and encourage participation in democracy. Using our civic design skills in user experience design, usability testing, accessibility, and plain language, we have helped hundreds of election officials build their skills and capacity, and touched millions of voters.

We have a long history of work on standards for voting systems. Before starting the Center for Civic Design, I served on the Election Assistance Commission's Technical Guidelines Development Committee (TGDC) as the chair for human factors and privacy, developing the federal Voluntary Voting Systems Guidelines (VVSG) 1.0 and 1.1. I continue to work on the next version, VVSG 2.0. After founding the Center for Civic Design, we have conducted research projects on election design for the National Science Foundation, National Institute of Standards and Technology Voting Project, Knight Foundation, and the EAC-funded ITIF Accessible Voting Technology Initiative.

Our series of booklets, the Field Guides to Ensuring Voter Intent, which summarize the best research in election design, can be found in election offices across the country. This research is also the basis for the first course in the nation on Election Design, offered in the University of Minnesota's Certificate in Election Administration.

The Help America Vote Act (HAVA) of 2002 and the voting system guidelines came into being following the 2000 Presidential election, in which flawed ballot design and a voting system that did not allow for effective review and verification arguably caused ballots to be cast in a manner contrary to voter intent.

Since then, there has been a substantial body of research showing the impact of poor design. In 2008, the Brennan Center report *Better Ballots*[2] and the 2012 *Better Design, Better Elections*[3] documented examples of real elections in which flaws in design and instructions on both paper and electronic ballots caused lost votes. Even improving election materials like the signature forms for absentee ballots can make a difference.

In Minnesota, for example, a new design cut the number of absentee ballots that could not be counted in half.

The idea of universal design has been part of the work on voting system standards from the beginning. One of the first resolutions adopted by the TGDC, *6-05 Accommodating a Wide Range of Human Abilities*, says:

> The voting population includes not only people with specifically identified disabilities but also the aging population, language minorities, and people with other special needs. A goal of voting system standards should be to accommodate, as much as possible, this wide range of abilities to ensure the greatest usability and accessibility of those systems. This approach is sometimes called "universal design" or "universal usability."

The concept of "universal design" is not a one-size-fits-all voting system, but one that includes technologies such as audio output and a choice of input devices to allow people with different abilities and accessibility needs to choose the formats that best support them in marking, verifying, and casting their ballot.

One voting system architecture that can be both accessible and secure is a ballot marking device. These systems have an electronic interface for marking the ballot, and then printing a paper ballot for verification and casting. The electronic interface has advantages for accurate ballot marking for many types of voter needs:

- **Language access.** Using an electronic interface helps voters with low English proficiency by allowing them to switch between English and an alternative language provided under the Voting Rights Act. In our research, we see that voters who are able to vote in English for contests for office benefit by being able to switch to an alternate language to read the more complex legal text of ballot questions.
- **Support for low literacy.** According to the U.S National Assessment of Adult Literacy[4], 44% of adult Americans read at basic or below basic levels. The work of Dr. Kathryn Summers at the University of Baltimore[5] documents how characteristic habits of voters who do not read well can make it harder to vote. A well-designed electronic interface supports low literacy voters by providing immediate feedback for their ballot, making it easy to fix errors, and creating a linear flow through the ballot as they mark one contest at a time.

- **Adjustable visual interface.** Electronic voting interfaces allow voters to change the size and contrast of the text so that they can read the screen. This helps voters with visual disabilities, but is also important for voters who don't read well, and others who may have simply forgotten their reading glasses.
- **Tactile input keys.** Alternative keypads and access ports for dual switches, sip-and-puff devices, and other assistive technologies allow those with manual dexterity challenges, or who cannot use the touch screen, to vote independently.
- **Audio output format.** The value of audio is obvious for blind voters, but it is also useful for voters who don't read well, to reinforce ballot content for voters with cognitive or reading disabilities such as dyslexia or some attention disorders, and for language access for non-written Native American languages. Researchers at Rice University have suggested that even voters with no visual disability would benefit from the combination of visual and audio feedback and confirmation[6].

The electronic marking interface has value for all voters because it provides immediate feedback of the candidate selected and helps avoid errors: It can warn of undervotes—opportunities to vote not taken, either because a contest was skipped or options in a multi-selection contest were left blank. More importantly, the interface prevents overvotes, marking too many choices and invalidating the vote in a contest. Finally, the review screen offers voters a chance to check their votes and make corrections before printing a paper ballot.

There have been concerns about the time it takes to vote, but it may be faster to vote with an electronic interface. In research at Clemson University into how to speed up the voting process[7], participants took almost a minute longer using a hand-marked paper ballot. In our own research, we have observed that the time to vote a ballot may be as much a function of personal habits as the marking method. In a study in which participants marked the same ballot on an electronic interface and on paper ballots, people took close to the same time for both depending on whether they tended to mark and review slowly or rushed through the process.

Because they produce a paper record, ballot marking systems avoid the security issues of fully electronic voting systems (known as DREs) in which voters both mark and cast the ballot electronically. However, the paper ballot must be designed so that it can be easily read with a magnifying device or using personal assistive technology that can read the printed text through optical character recognition (OCR) so that blind and low vision voters can also verify the paper ballot.

The benefits of a ballot marking device are not automatic. They must be well-designed for a usable and accessible voting experience—in both visual and audio formats. The best way to ensure that a voting system meets the goals of universal design, allowing the wide range of people to use it effectively, is through a robust program of usability testing[8]. Usability testing is a way to learn about how easy or difficult it is for people to use something by observing them actually using it. This kind of testing is an important part of the design and development process, but is also invaluable for involving the entire community in the process of selecting a voting system, planning polling place procedures and election worker training, and voter education on how to use the system.

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[1] https://civicdesign.org/

[2] https://www.brennancenter.org/publication/better-ballots

[3] http://www.brennancenter.org/publication/better-design-better-elections

[4] https://nces.ed.gov/naal/kf_demographics.asp

[5] Summers & Langford, "The Impact of Literacy on Usable and Accessible Electronic Voting" https://www.researchgate.net/publication/279447226_The_Impact_of_Literacy_on_Usable_and_Accessible _Electronic_Voting . Summary available at: https://civicdesign.org/writing-election-information-that-everyone-can-read/

[6] http://accurate-voting.rice.edu/2008/10/22/vote-flipping-on-hart-intercivic-eslate-systems/index.html

[7] Lola, P., Eugene, W., Hall, P., & Gilbert, J. E. (2013). Balloting: Speeding Up the Voting Process. In Communications in Computer and Information Science (pp. 373–377).

[8] https://civicdesign.org/fieldguides/testing-ballots-for-usability/ and https://electiontools.org/tool/usability-testing-kit/

SAVEourVotes
SECURE•ACCESSIBLE•VERIFIABLE ELECTIONS FOR MARYLAND

HB 565: Election Law–Voting Systems–Accessibility for Voters With Disabilities
Heard in the Ways & Means Committee, February 19, 2019
Revised Position: FAVOR WITH AMENDMENTS

Madame Chair and Esteemed Committee Members,

This bill seeks to address the problem that voters who use the ExpressVote Ballot-Marking Device (BMD) have a ballot that is different in size, shape, and format from those who mark their ballots by hand. Since voters with many types of disabilities need to use these devices to mark a paper ballot, some disability advocates fear that this provides a means to determine how the disabled community voted, or potentially even how a specific voter voted.

We completely support the concerns of voters with disabilities about the privacy of their votes. Voting by secret ballot is fundamental to American democracy because it prevents voter intimidation and coercion. Therefore, we support the requirement in this legislation that ballots marked by the BMD must match ballots marked by hand.

We do not support requiring all voters to use a BMD, but we would support specifying the minimum number of voters who must use each existing BMD to preserve the privacy of all voters who use it.

The amendments we propose are:
1) Retain §9–102 (g) (1) — the requirement that at least one voting system in each polling place must provide access for voters with disabilities;
2) Require that a minimum number of voters must use each ballot-marking device;
3) Retain this language: (II) A BALLOT CAST BY A VOTER WITH A DISABILITY MAY NOT BE SET APART OR DISTINGUISHABLE FROM, IN SIZE AND FORM, A BALLOT CAST BY A VOTER WITHOUT A DISABILITY; and
4) Add requirements that the BMD ballot:
   • must be voter-verifiable through both visual and nonvisual means, and
   • the marks verifiable by the voter must be the same marks used to tabulate the votes.

There are at least 2 voting systems currently available on the market that would meet these and all of the other requirements already specified in statute which the ExpressVote BMDs do not meet (see attached document). When Maryland's lease for the current voting system expires after the 2020 elections, we support the move to a voting system that complies with state law. Since it will probably take at least 2 years to select and procure a new voting system, this bill would be timely in moving us towards that goal.

When Maryland procured the current voting system, the State Administrator of Elections obtained an opinion from the Office of the Attorney General about whether a BMD ballot that is a different size and format from the ballot hand-marked by voters meets the definition of a "segregated ballot." The opinion said:

> First, SBE may require all voters to use a voting system that is accessible to voters with disabilities. This option would not segregate ballots in any way, but the cost and inefficiency of such a system— which the statute requires SBE to consider—might weigh against it. Second, SBE may certify an accessible voting system that generates a ballot that is formally identical to those ballots cast by non-disabled voters so long as all ballots are cast, counted, and stored together. Finally, after considering the legislative history and the definitions and usage of the term "segregated," we conclude that the statute permits SBE to certify an accessible voting system that generates a non-identical ballot, so long as voting procedures are implemented to ensure that non-disabled voters use the accessible system as well and do so in sufficient numbers to prevent the resulting ballots from being identified as having been cast by voters with disabilities.
> (See http://www.marylandattorneygeneral.gov/Opinions%20Documents/2013/98OAG152.pdf)

We do not support the requirement that all voters must use a ballot-marking device. That would necessitate, as the fiscal note says, at least 18,000 additional BMDs to be added to the current stock of about 1,900 BMDs statewide, which would more than double the current costs of MD's voting system. Even that quantity would probably not be enough to accommodate all voters during peak voting hours, and we know from past experience with our previous touch-screen voting system that when voters are forced to wait an hour or two to vote, some are disenfranchised. Elderly or infirm voters, those waiting in line with small children, or those who have to report for shift work or pick up children by a specific time are often unable to stay long enough to vote. The rights of voters with disabilities must be balanced with the rights of all voters to use an efficient and cost-effective voting system.

The second option discussed in the opinion above — a voting system with a BMD ballot that matches the hand-marked paper ballots — would be the fairest option. We support procuring such a system when Maryland's current lease term ends following the 2020 elections. Until then, we would support a legislative requirement specifying the minimum number of voters who must use each deployed BMD to protect the privacy of all voters who use it.

We urge you to amend and pass this legislation to move Maryland forward to a voting system that is fairer and more verifiable, yet would be as cost-effective as our current voting system.

With greatest respect for all that you do to improve our elections,

Robert Ferraro and Rebecca Wilson, Co-Directors
SAVE our Votes: Secure, Accessible, Verifiable Elections for Maryland
ferraro@SAVEourVotes.org   301.661.2989
rebecca@SAVEourVotes.org   202.601.8182

Article - Election Law

The ExpressVote Ballot-Marking Device does not comply with these requirements of Maryland law:

§9–102.
    (a) The State Board may not certify a voting system unless the State Board determines that:

        (1) the voting system will:

            (v) protect all other rights of voters and candidates;

The ExpressVote Ballot-Marking Device (BMD) interface can present only a limited number of candidates on a single screen. This may disadvantage candidates who appear on subsequent screens, which is the reason the State Board of Elections restricts the widespread use of these BMDs. The navigation designed to force voters to view all the candidates in each contest before moving to the next contest is confusing to voters, who often require assistance from election judges and have a frustrating voting experience.

            (vii) provide a voter–verifiable paper record that:

The ballot printed by the ExpressVote BMD is not voter-verifiable. The voter can read the text on the ballot but not the barcodes used to tabulate the votes, so voters cannot verify that these ballots accurately represent how they voted. The automated audit also examines only the barcodes and does not check that the barcodes match the voter-verifiable text (see diagram on reverse).

        (3) the public interest will be served by the certification of the voting system.

A ballot that is not voter-verifiable undermines public trust in the voting system. A system that provides verifiable ballots to some voters and not to others discriminates against those voters whose ballots are not voter-verifiable.

(f) A voting system selected, certified, and implemented under this section shall:

        (1) provide access to voters with disabilities that is equivalent to access afforded voters without disabilities without creating a segregated ballot for voters with disabilities;

Because the ExpressVote BMD does not provide a voter-verifiable ballot and it is the only means for many voters with disabilities to mark a ballot independently and privately in the polling place, it does not provide access to voters with disabilities that is equivalent to access afforded voters without disabilities.

§ 9-203. Ballot requirements
    (a) Each ballot shall:

        (2) present all candidates and questions in a fair and nondiscriminatory manner;

The ExpressVote BMD provides a ballot that shows only the choices the voter selected. It does not include all candidates or present ballot questions. And the interface that the voter uses to mark the ballot does not display candidates fairly, as noted above in 9-102 (a) (1) (v).

**Ballots printed by the
ES&S ExpressVote Ballot-Marking Device
are not verifiable by the voter
because the voter can't read the barcodes
used to count the votes**

Paper ballots marked by hand are voter-verifiable


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00000111
ELECTION: GENERAL ELECTION
ELECTION DATE. 11/08/2016
PRECINCT  748-050 SPG 15 050
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U S  PRESIDENT AND U S  VICE PRESI-REP DONALD J  TRUMP
U S  SENATE · · ·  · · · · · · · · · · · · -REP SENATOR JOHN BOOZMAN
U S  CONGRESS DISTRICT 03-REP CONGRESSMAN STEVE WOMACK
STATE REPRESENTATIVE DISTRICT 89 DIS-REP JEFF WILLIAMS
COUNTY JUDGE · · · · · · · · · · · · · · · · · · · · -REP JOSEPH K  WOOD
COUNTY ASSESSOR · · · · · · · · · · · · · -REP ASSESSOR RUSSELL HILL
CIRCUIT CLERK · · · · · · · · · -REP CIRCUIT CLERK KYLE SYLVESTER
CONSTABLE DISTRICT 01 DISTRI-REP CONSTABLE JOHN DUGGAR
MAYOR SPRINGDALE · · · · · · · · · · · · · · · · · · · MAYOR DOUG SPROUSE
CLERK/TREASURER SPRINGDALE · · · · · · · · · · · -NO SELECTION MADE
ALDERMAN WARD 1 POSITION 2 SPRINGDALE · · · · · · · · -ERIC FORD
ALDERMAN WARD 2 POSITION 2 SPRINGDALE · · · · · · · RAY DOTSON
ALDERMAN WARD 3 POSITION 2 SPRINGDALE · · · · · · JEFF WATSON
ALDERMAN WARD 4 POSITION 2 SPRINGDALE · · · · · JEREMY LYNCH
ISSUE NO  1 · · · · · · · · · · · · · · · · · · · · · · · · · · · -FOR ISSUE NO  1
ISSUE NO  2 · · · · · · · · · · · · · · · · · · · · · · · · · · · -FOR ISSUE NO  2
ISSUE NO  3 · · · · · · · · · · · · · · · · · · · · · -NO SELECTION MADE
ISSUE NO  4 · · · · · · · · · · · · · · · · · · · · · · · -FOR ISSUE NO  4
ISSUE NO  5 · · · · · · · · · · · · · · · · · · · · · -FOR ISSUE NO  5
ISSUE NO  6 · · · · · · · · · · · · · · · · · · · · · · -FOR ISSUE NO  6
ISSUE NO  7 · · · · · · · · · · · · · · · · · · · · · · · · -FOR ISSUE NO  7
UNOPPOSED CANDIDATES · · · · · · · · · -NO SELECTION MADE
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Ballot scanner and automated "audit" software can read only the barcodes, not the text	**Voter can read only the text, not the barcodes, and cannot verify that they match**

MONTGOMERY COUNTY

**DEMOCRATIC PRIMARY ELECTION
OF THE STATE OF MARYLAND**

June 26, 2018

**Instructions
Instrucciones**

Making Selections
Como Marcar sus Selecciones

Fill in the oval to the left of the name of your choice. You must blacken the oval completely, and do not make any marks outside of the oval. You do not have to vote in every race.

Llene el óvalo a la izquierda del nombre de su selección. Debe rellenar completamente el óvalo. No haga ninguna marca fuera del óvalo. No tiene que votar en cada contienda.

Do not cross out or erase, or your vote may not count. If you make a mistake or a stray mark, you may ask for a new ballot.

No tache o borre su voto. Si comete un error o hace una marca demás, puede solicitar una nueva papeleta.

Governor / Lt. Governor
Vote for 1
Gobernador / Vicegobernador
Vote por 1

○ Rushern L. Baker, III

Comptroller
Vote for 1
Contralor
Vote por 1

○ Peter Franchot
Unopposed/Sin Oponente

Attorney General
Vote for 1
Procurador General
Vote por 1

○ Brian E. Frosh
Unopposed/Sin Oponente

U.S. Senator
Vote for 1
Senador de EE.UU.
Vote por 1

○ Ben Cardin
○ Erik Jetmir
○ Chelsea Manning
○ Marcia H. Morgan
○ Jerome "Jerry" Segal
○ Richard "Rikki" Vaughn
○ Debbie "Rica" Wilson
○ Lih Young

Representative in Congress
District 6
Vote for 1
Representante en el Congreso
Distrito 6
Vote por 1

○ Andrew Duck
○ George English
○ Chris Graves
○ Nadia Hashimi
○ Christopher Hearsey
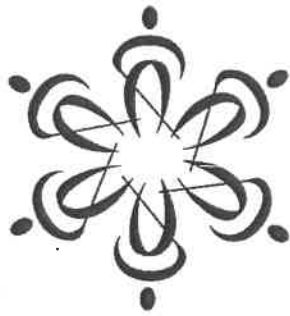○ Roger Manno
○ Aruna Miller
○ David Trone

**House of Delegates
District 16**
Vote for up to 3
Cámara de Delegados
Distrito 16
Vote hasta por 3

○ Jordan Cooper
○ Nuchhi Currier
○ Joseph Aloysius Hennessey
○ Ariana Kelly
○ Marc Korman
Marc Lande
○ Sara Love
○ Samir Paul

County Executive
Vote for 1
Ejecutivo del Condado
Vote por 1

○ Roger Berliner
○ David Blair
○ Marc Elrich
○ Bill Frick
○ Rose Krasnow
○ George L. Leventhal

Voter, scanner and automated "audit" software are all reading the same thing — the ovals filled in on the ballot

Please note: These ballot images are for purposes of illustration only and are not intended to reflect a political viewpoint.

NATIONAL FEDERATION
OF THE BLIND
MARYLAND

Live the life you want.

Subject:	**Support for Amendment to HB565/SB363**
To:	**House Ways and Means Committee**
From:	**Members of the National Federation of the Blind of Maryland**
Contact:	**Sharon Maneki, Director of Legislation and Advocacy** **National Federation of the Blind of Maryland** **9013 Nelson Way** **Columbia, MD 21045** **Phone: 410-715-9596** **Email: nfbmd@earthlink.net**

HB565/SB363 will restore the secret ballot to blind and other disabled voters. The amendments will give the State Board of Elections (SBE) more time to determine proper procedures to eliminate segregation by changing the implementation date from the elections of 2022 to the elections of 2024.   The amendments will also require SBE to offer the electronic ballot marking device (BMD) to all voters or to ensure that the ballot printed from the BMD looks the same as a ballot marked by hand.   Starting with the 2020 elections, SBE must institute procedures so that at least ten percent of the voters in each precinct use the BMD and report their progress to the House Ways and Means Committee and the Senate Education, Health and Environmental Affairs Committee.

Maryland must end the practice of segregated voting. Please vote in favor of the amended HB565/SB363.